

## Remarks

The Examiner allowed claims 21–31 and 42, rejected claims 1, 5, 8–11, 15, 18–20, 32, 36, and 39–41, and objected to claims 2–4, 6, 7, 12–14, 16, 17, 33–35, 37, and 38. Claims 1–3, 5–7, 9, and 10 have been amended. Claims 1–42 remain in the application.

Claim 1 has been amended to better define the outer periphery of the sprocket as defining first and second arcs offset axially and circumferentially from each other and having circumferentially spaced drive structures formed along each of the first and second arcs. Support for the amendment appears in paragraphs 19, 21, and 23 of the specification and in FIGS. 1, 2, and 3. The Examiner rejected claims 1, 5, and 8–10 under 35 U.S.C. § 102(e) as being anticipated by Griffiths et al. (US 6,740,172). In his § 102(e) anticipation rejection of the claims, the Examiner stated that Griffiths et al. discloses a sprocket that includes a shaft on which it is mounted, a hub with a bore for the shaft, and an outer sprocket periphery with surfaces that are laterally offset relative to one another and that contact an area of the inner belt surface that varies laterally. MPEP § 2131 provides: “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Contrary to the Examiner’s suggestion that Griffiths et al. discloses all the elements of the rejected claims, Griffiths et al. does not disclose, for example, a sprocket with an outer periphery defining a first arc and a second arc offset axially and circumferentially from each other and having circumferentially spaced drive structures formed along each of the first and second arcs. As shown in the drawings and described at col. 4, ll. 20–22, the Griffiths et al. sprockets present smooth outer peripheries on sprocket sectors that “provide sufficient gripping surfaces to prevent slippage of the belt as it rotates about the sprockets.” The outer peripheries of the sprocket sectors in Griffiths et al. do not have circumferentially spaced drive structures along each arc. Therefore, the 35 USC § 102(e) rejection of independent claim 1 is unsupported by the art and should be withdrawn. The rejections of or objections to dependent claims 5–8, which now all depend from claim 1 by virtue of amendments to claims 5–7 changing their dependency, should also be withdrawn.

Claims 2, 3, 9 and 10 have been amended. The Examiner objected to claims 2 and 3 as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Claims 2 and 3 have been so rewritten to be in allowable form. Dependent claims 9 and 10 have been amended to depend from claim 2, and their rejection should be withdrawn. The objection to claim 4, a claim 3 dependent, should be withdrawn.

Applicants traverse the rejection of claims 11, 15, 18–20, 32, 36, and 39–41 as improper. The Examiner rejected claims 11, 15, 18–20, 32, 36, and 39–41 under 35 U.S.C. § 103(a) as being unpatentable over Griffiths et al. in view of Vetter (US 2005/0061633).

Before prior art can be combined or modified, there must be a basis in the art for the combination or modification. The Griffiths et al. and Vetter references are not properly combinable or modifiable as suggested by the Examiner. If the rotating shaft of Vetter were used to substitute for the hollow non-rotating shaft of Griffiths et al., the substitution would render the belt cleaning apparatus of Griffiths et al. unsatisfactory for its intended purpose. The purpose of the belt cleaning apparatus of Griffiths et al. is to thoroughly clean the hinges of a conveyor belt as they open when the belt articulates about a sprocket (col. 2, ll. 47–52). To clean the hinges as they open when the belt wraps around the sprocket, Griffiths et al. teaches that “each nozzle member is angled with respect to a longitudinal axis of the hollow sleeve so that the spray impinges on the hinges of the belt as the belt travels over the sprockets” (col. 5, ll. 1–3). Because the nozzles extend from the non-rotating hollow shaft of Griffiths et al., they are stationary and their spray is directed in an unchanging direction across the width of the belt as the belt travels past. In this way, the apparatus of Griffiths et al. directs its flat “fan spray pattern” (col. 5, l. 14) at an area in space through which the belt passes so that the entire belt is subjected directly to the cleaning spray. But, if the rotating shaft of Vetter were substituted, the nozzles would rotate with the shaft. This would cause the spray to be directed at the same place along the length of the belt because the nozzles would rotate with the same angular speed as the shaft and the engaged belt. This would result in uneven belt cleaning—with some areas of the belt subjected to the full force of the spray during their entire ride around the sprocket and adjacent areas subjected to less or no spray at all. And there would be no

guarantee that the nozzles would even be aimed at the hinges. Furthermore, if the nozzles rotated with the shaft, a lot more nozzles would have to be positioned around the circumference of the shaft to get even a reasonable amount of spray along the length of the belt. Even with a lot more nozzles, the cleaning action would be uneven along the length of the belt. That's why Griffiths et al. teaches a non-rotating hollow shaft with stationary nozzles: to clean the belt evenly "along its entire extent and breadth" (col. 5, ll. 66-67). Because Vetter's rotating shafts would render the belt cleaning apparatus of Griffiths et al. unsatisfactory for its intended purpose (see MPEP §2143.01 and *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984)), the Examiner has failed to establish a *prima facie* case of obviousness. Consequently, the § 103(a) rejection of claims 11, 15, 18-20, 32, 36, and 39-41 is improper.

Applicants respectfully request reconsideration of the rejection of claims 1, 5, 8-11, 15, 18-20, 32, 36, and 39-41 and the objection to claims 2-4, 6, 7, 12-14, 16, 17, 33-35, 37, and 38 and their allowance, along with the already allowed claims, in view of these remarks and amendments, none of which adds new matter.

This response is being mailed within three months of the Office Action. The fee for two additional independent claims is authorized to be charged to Deposit Account No. 12-0090 in the accompanying Fee Sheet. Any other fees considered necessary for consideration of this response may also be charged to Deposit Account No. 12-0090. If the Examiner thinks a telephone conference would expedite the prosecution of this application, he is invited to call the undersigned attorney.

Respectfully submitted,  
Kevin W. Guernsey et al.

Date: July 7, 2006

By: /jtc/  
James T. Cronvich  
Reg. No. 33163  
Laitram, L.L.C.  
220 Laitram Lane  
Harahan, LA 70123  
Telephone: (504) 570-1243  
Fax: (504) 734-5233